

**Statement of Cary Coglianese
Edward B. Shils Professor of Law and Professor of Political Science
Director, Penn Program on Regulation
University of Pennsylvania Law School**

Before

**The Committee on the Judiciary
Subcommittee on Commercial and Administrative Law
House of Representatives**

July 25, 2006

On

**“The 60th Anniversary of the Administrative Procedure Act:
Where Do We Go From Here?”**

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Mr. Chairman and Members of the Subcommittee, my name is Cary Coglianese and I appreciate the invitation to testify here today about the how the future of administrative rulemaking may be affected by advances in information technology.

I am the Edward B. Shils Professor of Law and Professor of Political Science at the University of Pennsylvania and a Senior Research Fellow at the John F. Kennedy School of Government at Harvard University. My research and teaching focus on regulation, administrative law, and environmental law, with a particular emphasis on the empirical evaluation of alternative regulatory strategies and procedures. I am a Vice Chair of the E-Rulemaking Committee of the American Bar Association's section on

Administrative Law and Regulatory Practice, and have published a number of research papers on e-rulemaking, or the application of advanced information technology to the rulemaking process.¹

Beginning in 2002, with support from the National Science Foundation's Digital Government Program, I convened a series of workshops designed to develop a research agenda on e-rulemaking.² This effort has played a role over the last several years in launching a new, interdisciplinary community of academic researchers working on e-rulemaking, connecting researchers with government officials responsible for information technology and rulemaking, and helping generate a growing body of academic research.³

In 2005, I worked with the staff of this Subcommittee as well as with the Congressional Research Service to convene a symposium on e-rulemaking held here on December 5, 2005. This symposium, sponsored by the Subcommittee, brought together legislative and executive branch staff and appointees with academic researchers, representatives from non-governmental organizations, and other interested members of the public for an extended dialogue on e-rulemaking and its implications for the future of administrative law.

¹ Cary Coglianese, *Weak Democracy, Strong Information: The Role for Information Technology in the Rulemaking Process*, in Viktor Mayer-Schoenberger & David Lazer, eds., *From Electronic Government to Information Government: Governing in the 21st Century* (MIT Press, forthcoming 2007); Cary Coglianese, *Citizen Participation in Rulemaking: Past, Present, and Future*, *Duke Law Journal* (forthcoming 2006) (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=912660); Cary Coglianese, *E-Rulemaking*, in Ari-Veikko Anttiroiko and Matti Malkia, eds., *Encyclopedia of Digital Government* (Idea, 2006); Cary Coglianese, Stuart Shapiro, & Steven J. Balla, *Unifying Rulemaking Information: Recommendations on the New Federal Docket Management System*, *Administrative Law Review* 57: 621-645 (2005); Cary Coglianese, *The Internet and Citizen Participation in Rulemaking*, *I/S: Journal of Law and Policy for the Information Society* 1: 33-57 (2005); Cary Coglianese, *E-Rulemaking: Information Technology and the Regulatory Process*, *Administrative Law Review* 56: 353-402 (2004); Cary Coglianese, *Information Technology and Regulatory Policy*, *Social Science Computer Review* 22: 85-91 (2004).

² The workshops were supported under NSF award number 0226053 (8/15-2002 - 7/31/2004). The final report from the workshops can be found on-line at http://www.ksg.harvard.edu/cbg/rpp/erulemaking/papers_reports/E_Rulemaking_Report2004.pdf.

³ Much research produced on e-rulemaking in the last four years, as well as various related government reports and documents, can be found on-line at www.erulemaking.org.

My testimony today draws on some of the presentations and deliberations that took place at the December 2005 symposium, but also on my other research related to e-rulemaking. My comments fall into three categories. First, I briefly review the progress made to date by the federal government in implementing e-rulemaking. Second, I report some of the principal findings from available empirical research on the impact of e-rulemaking on public participation in the rulemaking process. Finally, I highlight some issues that remain for consideration both by researchers as well as by legislative and executive decision makers.

I. Progress on E-Rulemaking

In the early to mid-1990s, as the Internet began to find its way into business transactions as well as everyday life, the movement to apply information technology to the rulemaking process began to take shape. During this time, the Clinton Administration's National Performance Review recommended that agencies begin to explore uses of new technologies in the regulatory process.⁴ The Administrative Conference of the United States (ACUS) issued a comprehensive report on the use of on-

⁴ Office of the Vice President, Accompanying Report of the National Performance Review, *Creating a Government That Works Better & Costs Less: Improving Regulatory Systems* 39 (1993), *available at* <http://govinfo.library.unt.edu/npr/library/reports/reg04.html> (recommending that agencies "[i]ncrease [their] use of information technology," as this would, among other things, "give the public easier and more meaningful access to rulemaking and policy guidance documents"); Office of the Vice President, Accompanying Report of the National Performance Review, *Creating a Government That Works Better & Costs Less: Reengineering Through Information Technology* 25, 28 (1993), *available at* <http://govinfo.library.unt.edu/npr/library/reports/it03.html> (recommending the use of information technology "to reduce the complexities that citizens face" and improve "[c]itizen access to government information and services").

line dockets by administrative agencies.⁵ Congress adopted amendments to the Freedom of Information Act and the Paperwork Reduction Act designed, respectively, to increase the on-line availability of information held by administrative agencies and to expand agency use of information technology.⁶ And the Office of the Federal Register began to make the *Federal Register* and the *Code of Federal Regulations (CFR)* available on-line.⁷

Administrative agencies themselves began to make rulemaking documents available on their web sites. In addition, a few agencies began to scan comments and process them electronically, while other agencies began to allow the public to submit comments via email. In 1998, the Department of Transportation (DOT) became the first regulatory agency to establish a department-wide, on-line regulatory docket.⁸ This docket – which can be found at dms.dot.gov – provides full access to all supporting documents and public comments related to the Department’s rulemakings and gives member of the public an easy, electronic vehicle for submitting comments on proposed rules. Within a few years, the Environmental Protection Agency (EPA) and several other agencies also began implementing their own on-line docket systems.⁹

⁵ Henry H. Perritt, Jr., *Electronic Dockets: Use of Information Technology in Rulemaking and Adjudication*, Report to the Administrative Conference of the United States (1995), *available at* http://www.kentlaw.edu/classes/rstaudt/internetlaw/casebook/electronic_dockets.htm (discussing technical and legal issues related to improving public access to the regulatory process through e-rulemaking).

⁶ 1995 Paperwork Reduction Act Amendments, Pub. L. 104-14, 109 Stat. 186 (1995) (codified at 44 U.S.C. §§ 3501–21 (2000)); Pub. L. No. 104-231, 110 Stat. 3048 (1996) (codified at 5 U.S.C. § 552 (2000)).

⁷ On-line availability of the *Federal Register* began in 1994, while the *CFR* became available in 1996. *See* <http://www.gpoaccess.gov/nara/index.html>.

⁸ U.S. Department of Transportation, Department of Transportation’s Docket Management System, *available at* <http://www.Diggo.org/Archive/Library/Dgo2001/DGOMAC/MEDIA/MEERS.PDF>

⁹ *See* Cary Coglianese, E-Rulemaking: Information Technology and the Regulatory Process, *Administrative Law Review* 56: 353-402 (2004); Barbara H. Brandon & Robert D. Carlitz, On-line Rulemaking and Other Tools for Strengthening Our Civic Infrastructure, *Administrative Law Review* 54: 1421 (2003).

In 2002, Congress passed the E-Government Act,¹⁰ which directs agencies to accept comments that are submitted electronically and to establish full electronic dockets for their rulemakings. The Act also authorized a new Office of Electronic Government within OMB, required that this office produce guidelines for all agency web sites, and generally encouraged agencies to explore new applications of information technology.

Beginning around this same time, the George W. Bush Administration launched an eRulemaking Initiative as part of a larger e-government program.¹¹ The eRulemaking Initiative is managed by EPA in cooperation with other agencies and with oversight by OMB. It consists of three parts.

The first part, completed in January 2003, involved the creation of a search-and-comment portal located at www.regulations.gov. The *Regulations.Gov* portal houses an on-line, searchable index of the Office of Federal Register's listings of notices of proposed rules. Users can search all proposed rules that are open for public comment and use the portal to submit comments on any proposed rule issued by any federal agency. The system automatically disseminates comments submitted through *Regulations.Gov* to the appropriate administrative agencies.

The second stage of the Bush Administration's e-rulemaking project, first launched in September 2005, involves the implementation of a multi-agency docket management system. The aim is to use the new Federal Docket Management System (FDMS) to store, and allow public access to, all documents related to every new regulation across the entire federal government. Currently, about ten federal departments

¹⁰ E-Government Act of 2002, Pub. L. No. 107-347, 166 Stat. 2899 (2002).

¹¹ OMB, The President's Management Agenda, Fiscal Year 2002, *available at* <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>

or agencies, or portions thereof, have migrated their dockets to FDMS, and plans are to have additional agencies join the system in the coming years.¹²

A third stage of the eRulemaking Initiative, still in planning, is intended to develop a standard suite of desktop tools relevant to the work of rulemaking. These tools would assist agency staff in data collection, analysis, decision making, and rule-writing.

In addition to these efforts by the Bush Administration, administrative agencies continue to explore new applications of information technology to the rulemaking process. For example, several agencies have experimented with on-line dialogues, which allow members of the public to interact with each other and with government officials in Internet discussion forums.

II. Empirical Research on E-Rulemaking

These various e-rulemaking efforts have been justified on many grounds, including improved governmental transparency as well as administrative efficiency.¹³ Another common justification for using information technology in rulemaking has been to increase public participation in what has otherwise been a relatively obscure governmental process. Both governmental officials and administrative law scholars have predicted that information technology will expand the role of citizens in rulemaking.¹⁴

One of the earliest administrative law articles on e-rulemaking claimed that the Internet

¹² Oscar Morales and John Moses, eRulemaking's Federal Docket Management System (May 24, 2006), available at <http://erulemaking.ucsur.pitt.edu/doc/Crossroads.pdf>.

¹³ For a list of various goals that e-rulemaking could serve, see Cary Coglianese, E-Rulemaking: Information Technology and the Regulatory Process, *Administrative Law Review* 56: 353-402 (2004).

¹⁴ See, e.g., *supra* note 4; Press Release, Executive Office of the President, Office of Mgmt. & Budget, OMB Accelerates Effort to Open Fed. Regulatory Process to Citizens and Small Businesses (May 6, 2002), available at <http://www.whitehouse.gov/omb/pubpress/2002-27.pdf> (explaining the Bush administration's effort to make the "regulatory process more open to the public" through on-line rulemaking).

will “change[] everything,” helping to ensure that “[c]itizens can . . . play a more central role in the development of new agency policies and rules.”¹⁵ Another legal scholar has argued that e-rulemaking holds the potential to “enlarge significantly a genuine public sphere in which individual citizens participate directly to help . . . make government decisions.”¹⁶

Such predictions might appear bolstered by recent rulemakings that have generated large numbers of citizen comments. Over the past few years, for example, a Federal Communications Commission (FCC) rulemaking on media ownership,¹⁷ an EPA rulemaking on mercury pollution,¹⁸ and a U.S. Forest Service rulemaking on road construction in wilderness areas¹⁹ have each elicited hundreds of thousands of comments, many of which were submitted electronically.

The existence of such rules with large numbers of comments raises the question of whether e-mail and other applications of technology like *Regulations.gov* have facilitated an increase in citizen commentary on administrative rules. So far, the early

¹⁵ Stephen M. Johnson, The Internet Changes Everything: Revolutionizing Public Participation and Access to Government Information Through the Internet, *Administrative Law Review* 50: 277, 277, 303 (1998)

¹⁶ Peter M. Shane, Turning GOLD into EPG: Lessons from Low-Tech Democratic Experimentalism for Electronic Rulemaking and Other Ventures in Cyberdemocracy, *I/S: Journal of Law and Policy for the Information Society* 1: 147, 148 (2005); see also Cary Coglianese, E-Rulemaking: Information Technology and the Regulatory Process, *Administrative Law Review* 56: 353, 373 (2004) (reporting on an e-rulemaking workshop at which “[m]any participants were convinced that [information technology] would lead to a dramatic increase in the number of comments submitted on agency rules”); Orly Lobel, The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought, *Minnesota Law Review* 89: 342, 440 (2004) (“The new portals for notice and comment help make the public comment process more interactive and deliberative. This . . . increases public participation and democratic legitimacy.” (footnote omitted)).

¹⁷ JoAnne Holman, Strength in Numbers? Public Participation in the Media Ownership Proceeding at the Federal Communication Commission 3 (Aug. 31, 2005) (unpublished manuscript), available at <http://web.si.umich.edu/tprc/papers/2005/426/TPRC%206049.pdf>.

¹⁸ David Schlosberg et al., “To Submit a Form or Not to Submit a Form, That Is the (Real) Question”: Deliberation and Mass Participation in U.S. Regulatory Rulemaking (May 5, 2005), available at http://erulemaking.ucsur.pitt.edu/doc/papers/SDEST_stanford_precon.pdf.

¹⁹ Stuart W. Shulman et al., Electronic Rulemaking: A Public Participation Research Agenda for the Social Sciences, *Social Science Computer Review* 21: 1, 2–3 (2003).

empirical research on e-rulemaking has examined this precise question more extensively than any other.

To date, the available information on *Regulations.gov* suggests that it has not resulted in any substantial impact on public participation in rulemaking. The Government Accountability Office (GAO) reported in September 2003 that only about a few hundred comments came in via *Regulations.gov* during its first five months in operation.²⁰ According to the GAO's study, *Regulations.gov* brought in only about eight of the 300,000 overall comments submitted to the EPA and twenty-one of the 18,000 comments submitted to DOT during the same time period.²¹ By October 2004, *Regulations.gov* had reportedly brought in 9,800 comments to various federal regulatory agencies,²² which is clearly a more substantial response but still only amounts to an average of two comments per the 4,900 rules the federal government proposed during this same period. Furthermore, we simply cannot know how many of the comments submitted via *Regulations.gov* would have been submitted to agencies anyway through other channels. More study of the impact of *Regulations.gov* is certainly not unwarranted.

Even if *Regulations.gov* has not increased the level of citizen comments on agency rules, there remains the question of whether *e-mail* has contributed to any such increase. One media report has mentioned that comments on DOT rulemakings “soared

²⁰ U.S. General Accounting Office, Electronic Rulemaking: Efforts to Facilitate Public Participation Can be Improved 23 (Sept. 17, 2003), *available at* <http://www.gao.gov/new.items/d03901.pdf>.

²¹ *Id.*

²² Rick Otis, Federal eRulemaking Initiative, Presentation at the Meeting of the American Bar Association Section of Administrative Law & Regulatory Practice 13 (Oct. 21, 2004), *available at* http://www.ksg.harvard.edu/cbg/rpp/erulemaking/papers_reports/Otis___eRule_ABA_v3_final_10_21_04.pdf.

when electronic submission became routine.”²³ Comparing comments filed in 1998, the first full year of the DOT’s on-line docket, with comments filed two years later in 2000, it has been claimed that there has been nearly a twenty-fold increase in the average number of comments per rule.²⁴

However, any comparison of the average comments filed in two individual years can be misleading. Since rulemakings have not been randomly selected for email comment submissions, it is possible that DOT’s rules in 2000 were simply more controversial or otherwise more likely to generate comments than were its rules in 1998. It is also possible that the differences in the average number of comments stemmed from an exceptionally large number of comments in just one or two rules in 2000, even while most rules in both years still had about the same number of comments.

Recent studies have tested the impact of the availability of email and have found that, even after the introduction of email, most proposed rules still continue to generate relatively few comments, even though occasionally a rule will generate a high volume of comments. In a recent study of comments filed in seventeen randomly selected DOT rulemakings, 83 percent of the total comments came from just a single proceeding, a rule concerning the mandatory retirement age for commercial airline pilots.²⁵ According to the study, “most DOT rulemaking dockets established after [the introduction of DOT’s on-line system in] 1998 continued to receive only a few submissions during the notice-and-comment period.”²⁶ Similarly, according to a recent study of Federal

²³ Cindy Skrzycki, U.S. Opens On-line Portal to Rulemaking: Web Site Invites Wider Participation in the Regulatory Process, *Washington Post*, Jan. 23, 2003, at E1.

²⁴ *Id.*

²⁵ Ioana Munteanu & J. Woody Stanley, Participation in E-Rulemaking: Evidence from an Agency Electronic Docket (Nov. 1, 2004).

²⁶ *Id.*

Communications Commission (FCC) proceedings, “in 99% of dockets, the e-filing [option] does not seem to cause an increase in individual or interest group participation.”²⁷

A particularly careful study by political scientists Steven Balla and Benjamin Daniels was presented at the December 2005 Symposium on E-Rulemaking in the 21st Century.²⁸ Balla and Daniels examined over four hundred and fifty DOT rules, roughly half issued between 1995 and 1997 (before the introduction of the DOT’s on-line system) and the other half issued afterwards (between 2001 and 2003).²⁹ By systematically comparing comments before and after the agency’s on-line docket system, Balla and Daniels’ study was designed to avoid the problems of small samples or comparisons of just two individual years. They found, surprisingly, that commenting followed basically the same patterns across both time periods. The median rulemaking in 2001–03 generated nearly the same number of comments as the median rulemaking did in 1995–97 (thirteen versus twelve).³⁰ The *average* number of comments was different (628 in 2001–03 versus 162 in 1995–97), but only because of two (rare) outlier rules in the 2001–03 period that were especially controversial.³¹ By and large, most rules continued to generate relatively modest levels of comments even after email and on-line docketing.

Similar results can be found in other studies. According to study of nine of the most comment-prone DOT rulemakings in late 1999 and early 2000, for example, very

²⁷ John M. De Figueiredo, E-Rulemaking: Bringing Data to Theory, *Duke Law Journal*, vol. 56 (2006).

²⁸ Steven J. Balla & Benjamin Daniels, Information Technology and Public Commenting on Agency Regulations (Mar. 14, 2006) (updated version of paper presented at the December 2005 Symposium on E-Rulemaking in the 21st Century).

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

few individuals filed comments in the vast majority of the rulemakings.³² At least at present, neither email nor *Regulations.gov* appear to have resulted in any dramatic increase in public participation in the rulemaking process. Most rules continue to generate modest numbers of comments -- and still fewer comments from ordinary citizens. As in the past, the occasional rulemaking does attract a large number of citizen comments, but these rules remain rare. Moreover, most of the comments submitted in these rare rules are quite unsophisticated and unhelpful to the agencies, if not even duplicative. For example, in another study presented at the December 2005 Symposium, researchers examined about 500,000 comments submitted in connection with an especially controversial EPA rule, finding that less than 1 percent of these comments had anything original to say.³³

Of course, with the hindsight made possible by this growing body of empirical research, it probably should not be surprising that information technology has not caused any substantial upswing in citizen participation in agency rulemaking, at least in most rulemakings. The subject matter of most agency rules continues to be rather technical, if not arcane. Information technology may lower the cost of finding documents about proposed rules or of communicating with government officials, but it has not reduced the non-technological barriers -- such as lack of knowledge or motivation -- that stand in the way of more widespread citizen participation in rulemaking. Filing a comment in a rulemaking requires knowing about agency rulemaking in general, as well as knowing

³² Thomas C. Beierle, *Discussing the Rules: Electronic Rulemaking and Democratic Deliberation* (Resources for the Future, Discussion Paper No. 03-22, 2003), *available at* <http://www.rff.org/Documents/RFF-DP-03-2.pdf>

³³ David Schlosberg et al., 'To Submit a Form or Not to Submit a Form, That Is the (Real) Question': *Deliberation and Mass Participation in U.S. Regulatory Rulemaking* (May 5, 2005), *available at* http://erulemaking.ucsur.pitt.edu/doc/papers/SDEST_stanford_precon.pdf.

about the specific issues involved in a given agency rulemaking. Even with the Internet, it remains relatively costly for citizens to learn about a rulemaking proceeding and submit a substantive comment.³⁴ Moreover, these costs are what economists call opportunity costs. Even if the Internet decreases the absolute cost of submitting a comment to a government agency, it also decreases the absolute costs of other opportunities more attractive to most citizens, such as chatting with friends, keeping track of sports results, following the stock market, staying on top of celebrity gossip, or playing computer games.

The empirical findings to date suggest that non-technological barriers to public participation in rulemaking remain substantial. Perhaps the most that can be expected from e-rulemaking in terms of public participation, therefore, will be more modest, incremental changes. One incremental change could be an increase in participation by groups or individuals who are already highly motivated or reasonably sophisticated, such as by members of professional groups affected by proposed rules (e.g., pilots or flight attendants with respect to Federal Aviation Administration proceedings). A second incremental change could be an increase in the number of comments submitted on especially controversial rulemakings. Instead of seeing the exceptionally controversial rule receive hundreds or thousands of comments, as in the past, such rare rules may now start to receive tens of thousands or hundreds of thousands of comments. These effects may be notable in specific cases, but in general the level of public participation in rulemaking appears so far to have remained largely unchanged by the introduction of information technology.

³⁴ Cary Coglianese, *The Internet and Citizen Participation in Rulemaking*, *I/S: Journal of Law and Policy for the Information Society* 1: 33-57 (2005).

III. Remaining Issues and Challenges

The empirical results obtained to date are significant as they draw into serious question a popular belief that e-rulemaking will usher in a revolution in citizen participation. By relying on the best available information, policy makers and designers of administrative procedures can make more realistic judgments about how to use information technology in the regulatory process -- or whether to change rulemaking procedures given the new technologies that are now available. Of course, even though the effects of e-rulemaking on levels of public participation do not fit the conventional wisdom, this does not mean that information technology has no value or should not be applied in new ways to the rulemaking process. As noted earlier, e-rulemaking may be justified for other reasons, such as improved transparency, enhanced ability for congressional or executive branch oversight, reductions in administrative costs, greater ease of compliance, or improvements in researchers' ability to study (and thereby generate ideas about improvements in) regulatory policy. All of these other possible rationales for e-rulemaking certainly merit their own consideration, as well as their own empirical study.

There is still a good possibility that for some of the challenges associated with government rulemaking, technological improvements may provide demonstrable benefits. Some technological improvements may simply enhance existing e-rulemaking systems. For example, a number of concerns about deficiencies of the FDMS were raised by participants in the December, 2005 symposium sponsored by the Subcommittee, such

as concerns about the ease and accuracy of FDMS' search capability or the completeness and consistency of the data fields the system uses. Other improvements may be needed in order to achieve new or broader objectives. For instance, as several observers have noted, it is now possible to create information systems that would enable users to move seamlessly between related legislation and legislative history, implementing regulations, supporting regulatory documents and public comments, guidance documents, and even court filings and decisions.³⁵ Right now, separate information systems have been developed for information produced in separate institutional settings, whether in Congress, agencies, or the courts. Yet for those who must comply with regulations, if no others, it would be markedly easier to understand and navigate through their regulatory thicket with clear computer linkages built into different types of regulatory information.

Making technological improvements – whether to existing systems or in order to advance still broader objectives – undoubtedly will require some institutional change. Some of these institutional changes will be budgetary, for resources will be needed not only to make the technological developments and modifications but also for empirical research needed to determine which technologies to deploy or to evaluate their efficacy in practice. Other institutional changes will be legal and jurisdictional ones. At present, the government-wide FDMS has been developed and managed by the EPA, working in consultation with other regulatory agencies. However much one may admire the work EPA has done, it is still far from clear that any individual regulatory agency is the proper

³⁵ Jeffrey Lubbers, *The Future of Electronic Rulemaking: A Research Agenda*, Regulatory Policy Working Paper RPP-2002-04. Cambridge MA: Center for Business and Government, John F. Kennedy School of Government, Harvard University (2002) (also published in *Administrative & Regulatory Law News* 27: 6 (Summer 2002)); Richard D. Otis & Stuart C. Miles-McLean, *Federal Government Inter-Branch Integrated Regulatory Information* (May 24, 2006), available at <http://erulemaking.ucsur.pitt.edu/doc/Crossroads.pdf>.

venue for the management of such a cross-agency initiative. After all, the current eRulemaking Initiative has faced certain financial and legal constraints owing in part to its somewhat makeshift institutional structure.³⁶ If the government does seriously intend to centralize all its regulatory dockets, consideration should be given to whether to vest management of such a central system in an independent records agency, much like the *Federal Register* is produced within the National Archives and Records Administration.

Successful e-rulemaking will ultimately require integrating both technological and institutional considerations, seeking the optimal fit of both organizational structures and technological capabilities to achieve relevant goals. Since information technology is intended to achieve improvements to both the substance and process of rulemaking, future empirical research will also be needed to determine the extent to which information technology advances the goals of those who implement it. Continued collaborative efforts between government and the research community should enable decision makers to make better judgments about any further modifications to and improvements in the rulemaking process.

³⁶ Cindy Skrzycki, Document Portal Sticks on Funding, *Washington Post*, January 10, 2006; Page D01.